

Summary of Impacts by Option for I-93 Four-Lane Alternative as Compared to No Build

I-93 Salem-Manchester 10418-C		NO BUILD	Widening Options by Segment*																			TOTAL RANGE OF IMPACTS				
			Salem					Windham									Derry/ Londonderry		Londonderry/ Manchester				All Segments			
			A	B		C	D									E		F								
				Exit 1		Exit 2	Exit 3									Exit 4		Exit 5								
Resource		South of Cross Street	Reconstruct	Relocate	Loop	Diamond	I-93 NB Shift						I-93 NB/SB Tight Shift			East	West	Relocate NH 28	Reconstruct NH 28	Relocate NB Ramps	Bike Path (Maximum - worse case)	Park & Rides (New Facilities at Exits 2, 3, and 5)				
							NH111: On-Line NB Ramp: Loop w/slip	SB Ramp: Diamond	NH111: On-Line NB Ramp: Diamond	SB Ramp: Diamond	NH111: Full Relocation NB Ramp: Loop w/slip	SB Ramp: Diamond	NH111: Full Relocation NB Ramp: Diamond	SB Ramp: Diamond	NH111: Full Relocation NB Ramp: Loop								NH111: On-Line NB Ramp: Diamond	SB Ramp: Diamond	NH111: Full Relocation NB Ramp: Diamond	SB Ramp: Loop
							Option 1	Option 2	Option 3	Option 4	Option 5	Option 6	Option 7	Option 8	Option 9											
Transportation	Interstate and Interchange Improvements (miles) (mainline and ramps)	N/A	1.0	3.5	3.6	4.2	3.6	7.9	7.2	8.0	7.3	8.2	7.5	7.2	7.3	7.8	5.9	6.7	6.0	6.0	6.0	N/A	N/A	27.2 - 29.7		
	Local Roadway Improvements (miles)	N/A	0	0.5	0.5	1.6	1.4	1.6	1.6	2.0	2.0	2.0	2.0	1.6	2.0	2.0	1.1	1.1	1.6	1.5	1.6		0.4 - 1.3	6.5 - 8.1		
	Total Improvements (miles)	N/A	1.0	4.0	4.1	5.8	5.0	9.5	8.8	10.0	9.3	10.2	9.5	8.8	9.3	9.8	7.0	7.8	7.6	7.5	7.6		0.4 - 1.3	33.7 - 37.8		
	Number of Signalized Intersections	N/A	0	0	0	5 [1]	6 [1]	5 [1]	5 [1]	6 [1]	6 [1]	6 [1]	6 [1]	5 [1]	6 [1]	6 [1]	2	2	4 [1]	4 [1]	3 [1]		[3]	15 - 18		
Air Quality	Microscale CO Exceedances (2020)	None	No Exceedance of State and Federal CO Standards in 2020																			No Effect		None		
Surface Water Quality	Pollutant Contribution to Receiving Waters	Continued Pollutant Loading to 21 Streams	With proposed treatment measures, 17 of 21 Streams expected to have either lower or no net increase in pollutant loading as compared to No-Build. 4 Streams expected to have slight increase.																			No Impacts	Minor Effects	N/A		
Aquatic Life	Number of Perennial Stream Crossings	No Change	2	1		2		7									4		5			No Additional Streams	No Impacts	21		
Groundwater Quality	Stratified-Drift Under Roadway Area (Acres)	No New Impacts	9.9	12.2	16.4	7.2	7.2	No Stratified - Drift Under Roadway									33.8	32.5	11.2	10.7	11.1	16.0	0 - 13	88 - 107		
	Number of Public Wells where Roadway crosses WHPA	6	None	None	None	None	None	Proposed roadway slightly closer to 5 community wells, Tight Shift Options move NB lanes 700 feet from large community well.									Within 400 feet of small community well.		None	None	None	None	Exit 3 only	7 - 8		
Floodplains	Floodway (Acre - Feet)	No Impacts	2.4	0		0		No Impacts to Floodway									3.0	2.6	0.7			0.4	No Impacts	6 - 7		
	100 Year Floodplain (Acre - Feet)		21.2	0.5	0.5	12.5	12.5	1.5 Acre - Feet of impact to 100 yr. Floodplain									5.9	2.9	2.1			2.6		43 - 46		
Farmlands	Prime Farmland Soils (Acres)	No Impacts	No Impacts			3.2	3.1	0.3 Acres of impact to Prime Farmland Soils									0.8	0.4	No Impacts			2.7 +/-	Negligible	16 - 19		
	Farmland Soils of Statewide Importance (Acres)		0	0.3		2.7	1.6	0.4 Acres of impact to Farmland Soils of Statewide Importance									No Impacts		0.3			0.0				
	Farmland Soils of Local Importance (Acres)		0.4	0.4		2.2	2.2	No Impacts									0	1.2	0.3			3.6 +/-				
	Active Farmland (Acres)		0	0.4		No Impacts		No Impacts									0	9.0	No Impacts			< 1				
Wetlands	Palustrine Forested (Acres)	No Impacts	3.3	2.4	5.7	9.8	9.0	8.8	8.7	10.7	10.7	9.1	9.1	9.1	10.2	10.2	12.0	8.4	8.0	8.0	9.9	7.2	0.9 - 1.5			
	Palustrine Emergent (Acres)		0.6	1.0	2.1	2.3	1.4	2.2	2.2	2.2	2.0	2.0	4.1	4.0	4.0	5.2	4.1	7.0	7.0	6.6	1.1	0 - 1.4				
	Palustrine Scrub-shrub (Acres)		0.0	0.1	0.1	0.4	0.4	1.3	1.3	1.7	1.7	1.2	1.2	1.8	1.8	1.8	1.1	0.7	2.3	2.3	2.1	0.6	0.0			
	Palustrine Open Water (Acres)		0.0	0.4	0.5	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.4	0.0	0.0	0.0	0.4	0.0			
	Total Wetland Impacts (Acres)		3.9	3.9	8.4	12.5	10.7	12.3	12.2	14.6	14.6	12.3	12.3	15.0	16.0	16.0	18.4	13.6	17.3	17.3	18.5	9.3	0.9 - 2.9			
Vernal Pools	Number Impacted	No Impacts	0	0		0		1 Vernal Pool (#13) is impacted by all options									2	0	0	0	0	1	No Impacts	2 - 4		
Wildlife	Direct Impacts on Habitats (Acres)	No Impacts	Estimated 120 - 150 Acres of Upland Habitat and 60 - 75 Acres of Wetland Habitat Affected																			Approx. 30 Acres Affected	Approx. 27-30 Acres Affected	240 - 285		
Threatened and Endangered Species	Number Populations Impacted	No Impacts	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	No Impacts		1			
Noise	Number of Receptors Approaching or Exceeding FHWA Noise Abatement Criteria (1997/2020)	(265/265)	(75/96)			(22/32)		(31/37)						(31/23)			(58/72)		(48/56)			No Impacts		(265/316)		
Visual	Impacts to Views from and to the Highway	No Impacts	Soundwall will screen Haigh Ave. neighborhood.	Soundwall will screen neighborhoods east of NB off-ramp.		Buffer reduced between barrels and adjacent to Trolley Lane.		Tight Shift Options reduce buffer between barrels. Vertical alignment change to highway will be visible to adjacent neighborhoods.									Privacy fence used between highway and adjacent neighborhoods. Buffer reduced adjacent to Woodmont Orchards.		Reduced Buffer between barrels.			Negligible	Reduce Screening at Exit 2	N/A		
Archaeological	Number of Potentially Eligible Sites - Prehistoric / Historic Affected	No Impacts	0	0-2		9-10		15-18 Sites Potentially Affected									9-11		17			No Additional Sites	No Impacts	50 - 58		
Historical	Number of Potentially Eligible Sites - Properties Affected	No Impacts	1	0		0		1	1	0	0	0	0	3	2	2	2	3	2	1	2	No Additional Impacts	No Impacts	4 - 9		
Right-of-Way Displacement	Number of Residential Total Property Acquisitions	N/A	1	3	4	4	3	0	0	1	1	1	1	1	2	2	3	3	0	0	0	No Additional Acquisitions	8 - 9	18 - 22		
	Number of Business Total Property Acquisitions	N/A	0	0	0	1	1	5	5	7	7	8	8	6	8	9	2	2	1	0	0		1 - 5	9 - 18		
Economic	Change in Tax Base	No Impacts	Varies from a low of \$8 million to a high of \$15 million. Resultant loss in tax revenue dependent on each community tax rate.																			Negligible	Some loss Potentially at Exit 5	\$8 - \$15 m.		
Neighborhood and Community Facilities	Environmental Justice and Effects on Public Facilities	No Impacts	No Effect on Populations of Low Income or Minorities. No Community Facilities Impacted.																			No Effect		No Impact		
Land Use	Change in Land Uses	No Impacts	Small Direct Effect on Land Use Since Highway Widening Takes Place Largely within the Existing Right-of-Way																			Negligible		N/A		
Secondary Development	Stimulation of Growth	N/A	Potential Population Growth of 35,000 and 16,000 Additional Jobs by 2020.																			No Effect		N/A		
Public Parks and Recreational Land	4(f) and 6(f) Properties (Other than Historical)	No Impacts	No Impacts to Either 4(f) or 6(f) Properties (Other than Historical).																			No Impacts		None		
Hazardous Materials	Potentially Contaminated Properties	No Impacts	No Impacts	1 Site		2 Sites		1 Site	1 Site	3 Sites	3 Sites	3 Sites	3 Sites	3 Sites	5 Sites	5 Sites	2 Sites		4 Sites			No Impacts	2 to 3	12 - 17		
Energy	Fuel Use Efficiency	Continued Inefficient Fuel Use	Future Fuel Conservation with More Efficient Flow of Traffic and Emphasis on Multi-Modal Means of Travel																			Both Promote Fuel Conservation		N/A		
Footnotes: [n] Indicates portion of number relating to proposed Park and Ride												Summary of Impacts by Option for I-93 Four-Lane Alternative Figure 2.6-2														